

REMARKS

Applicant submits this Amendment in response to the Office Action mailed January 5, 2001. Application respectfully submits that the application as amended is in condition for allowance and respectfully requests an early indication of allowance.

I. BRIEF DISCUSSION OF AMENDMENTS

A. THE SPECIFICATION

As the Examiner will note, a number of amendments have been made to the specification. No new matter has been added.

First, a new section has been added which makes reference to original and duplicate compact discs submitted herewith in accordance with 37 C.F.R. § 1.96 which contain the computer program listings previously contained in figures 5(a)-5(d) and 6(a)-6(f), which figures have been canceled by this Amendment without prejudice.

Second, the BRIEF DESCRIPTION OF THE DRAWINGS section has been amended to reflect the cancellation of figures 5(a)-5(d) and 6(a)-6(f).

Third, an amendment has been made to page 8 of the specification to reflect the submission of the compact discs and cancellation of figures 5(a)-5(d), as well as to clarify that APPENDIXA.txt uses a simplified format which uses numbered data fields each corresponding to a data field in the ISO 8583 format. This simplified format can easily be converted to ISO 8583, and vice versa, through the use of a utility program, as those of ordinary skill in the art will appreciate.

Fourth, an amendment has been made to pages 9 and 10 of the specification to reflect the submission of the compact discs and cancellation of figures 6(a)-6(f).

B. THE CLAIMS

The Examiner will note that independent claims 1, 9, 17 and 22 have been amended and new claims 27-36 added. As discussed below, Applicant believes that all of the original claims, as amended hereby, and new claims 27-36 are allowable over the art of record.

C. THE DRAWINGS

Figures 5(a)-5(d) and 6(a)-6(f) have been canceled without prejudice in view of the compact discs submitted herewith in accordance with 37 C.F.R. § 1.96.

In addition, Applicant submits herewith for the Examiner's approval proposed corrections to figures 1-4. The proposed corrections are attached hereto as Appendix 8.

II. CLAIMS REJECTIONS

The Examiner rejected original claims 1, 2, 4-10 and 12-26 under 35 U.S.C. § 102(a) as being anticipated by Sandberg-Diment, U.S. Patent No. 5,826,245. The Examiner also rejected original claims 3 and 11 under 35 U.S.C. § 103(a) in view of that same reference as well as official notice of encryption taken by the Examiner. Application respectfully submits that all of the original claims, as amended hereby, and new claims 27-36 are patentably distinct from and allowable over Sandberg-Diment and the other art of record.

Sandberg-Diment discloses a method of verifying a transaction between a consumer and a merchant. In accordance with Sandberg-Diment, the consumer inputs a credit card number into his/her computer. Specialized software running on the computer then splits the credit card number into two halves and appends a tag to each half. Each half with its corresponding appended tag is referred to as a "token". The specialized software then sends one of the tokens to

the merchant and the other to a verification agent. The merchant then forwards the token it receives to the verification agent. The verification agent, having both tokens, matches them using the tags, reassembles the credit card number, and verifies the credit card number.

The present invention, on the other hand, is significantly different from Sandberg-Diment. Unlike Sandberg-Diment, in the present invention the consumer is not required to have any specialized software running on his/her computer other than a web browser. This distinction is important since it makes the present invention much more suitable for Internet shopping than Sandberg-Diment. The present invention may be used by any consumer without any computer configuration whatsoever. Only the merchant's web site needs to be specially configured, and such configuration is minimal. Sandberg-Diment, on the other hand, requires consumers to install and configure specialized token-generating software, which makes the Sandberg-Diment method undesirable to Internet consumers and unsuitable for Internet shopping.

Additionally, in the present invention, the consumer's computer does not split a single card number input by the consumer to generate tokens as disclosed in Sandberg-Diment. Rather, the consumer separately inputs and transmits two different numbers, in a preferred embodiment an ATM card number and a PIN, to the merchant and third party contractor, respectively. It is respectfully submitted that there is no teaching or suggestion in Sandberg-Diment that the method disclosed therein can be used to make Internet purchases using an ATM card number with PIN authentication (or other two-number combination) as claimed in the present invention. Sandberg-Diment only contemplates the use of a single card number, such as a credit card number.

Further, in the present invention, the interaction between the consumer and the third party contractor is markedly different from Sandberg-Diment. In Sandberg-Diment, the software on

the consumer's computer generates the tokens and transmits them to the merchant and the verification agent. The communication between the consumer and the verification agent in Sandberg-Diment is one-way (i.e., from consumer to verification agent) and requires the consumer to pre-store on his/her computer the network address for the verification agent.

In the present invention, the consumer does not forward the PIN to the third party contractor sua sponte. Rather, the third party contractor first queries the consumer for his/her PIN. In a preferred embodiment, the query takes the form of a graphical user interface resembling an actual ATM machine which is downloaded to the consumer's browser in response to a link between the consumer's computer and the third party contractor's computer which is triggered by the merchant. In response to this query, the consumer inputs and transmits his/her PIN to the third party contractor. This arrangement is more suitable for Internet shopping than that disclosed in Sandberg-Diment since the consumer does not have to store any specialized software or network addresses on his/her computer.

Additionally, it is clear that in Sandberg-Diment only a pre-selected verification agent may be used, since the software stored on the consumer's computer must be configured to transmit one of the tokens to a particular network address of the verification agent. The present invention, on the other hand, does not have this limitation because the PIN is transmitted by the consumer to the third party contractor in response to a query received from third party contractor which is triggered by the merchant. The consumer is not required to store any network addresses and, in fact, from the consumer's perspective the network address of the third party contractor is irrelevant. The present invention, unlike Sandberg-Diment, enables the merchant to select any third party contractor it desires to provide verification services without requiring the consumer to configure his/her computer in any way.

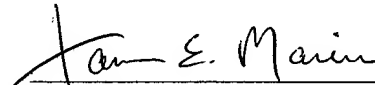
In view of the foregoing, independent claims 1, 9, 17 and 22 have been amended to more clearly indicate that the third party contractor queries the consumer for his/her PIN (or other authentication number). All of the amendments are fully supported by the specification. It is respectfully submitted that claims 1, 9, 17 and 22 as amended hereby, as well as all claims depending therefrom, are patentable over Sandberg-Diment and the other art of record.

Additionally, new claims 27-36 have been added to give Applicant a broader scope of protection for his invention. New claims 27-36 are fully supported by the specification and are believed to be patentable over the art of record as well. A check for \$500 covering the fee for new claims 27-36 is enclosed. The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment, to Account No. 501-814, Order No. 5932.1.

In view of the foregoing, Applicant respectfully submits that the application is in condition for allowance and respectfully requests an early indication of allowance.

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Respectfully submitted,


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APPENDIX 1

BRIEF DESCRIPTION OF THE DRAWINGS

In the accompanying drawings:

figure 1 is a schematic diagram of the system in accordance with the present invention;

figure 2 is a flow chart which illustrates how the system of figure 1 operates;

figure 3 shows a possible graphical user interface which can be used to enable the consumer to enter and transmit his PIN to the third party contractor; and

figure 4 is a diagram which summarizes the present invention[;

figures 5(a) - (d) show a computer program which can be used to format the data package sent from the second computer to the third computer in ISO 8583 format; and

figures 6(a) - (f) show a computer program which can be used by the third computer to synchronize the data packages received from the first and second computers].

APPENDIX 2

The data package transmitted by the second computer 16 to the third computer 20 [is] may be transmitted in ISO 8583 format. ISO 8583 is a messaging standard established by the International Standards Organization for financial transaction card oriented messages which is used by all banks and credit card companies and which is well known to those of ordinary skill in the art. ¶A sample computer program written in Java which creates the unique session identifier and formats the data package [in ISO 8583 format] is provided [in figure 5] on the compact disc referenced above as APPENDIXA.txt. The format used in APPENDIXA.txt is a simplified format which uses numbered data fields each corresponding to a data field in the ISO 8583 format. This program is designed to run as an Active Server Page on Internet Server 4.0 under Windows NT 4.0, although the program can be used on other platforms and programming environments, and can readily be implemented by one of ordinary skill in the art.

APPENDIX 3

The third computer 20 next verifies that the ATM card number and PIN are valid (block 64). Because the third-party contractor may be overseeing multiple transactions at any given time, the third computer 20 must synchronize the data packages received from the first and second computers 12, 16. To do this, the third computer 20 matches the unique session identifier, the merchant id, the terminal id, the expiration date of the ATM card and the purchase price fields contained in the data packages received from the first and second computers 12, 16. A sample computer program for synchronizing the messages received from the first and second computers 12, 16 is provided [in figure 6] on the compact disc referenced above as APPENDIXB.txt. The program is written in C++ and can readily be implemented by one of ordinary skill in the art. All of the forgoing data fields must match in order for the transaction to take place. For security reasons, a two minute window for matching is preferably implemented. If there is no match within the two minute window, the transaction is aborted.

APPENDIX 4

1. (Amended) A method of making purchases over a computer network using a first number that identifies a consumer's account from which funds will be withdrawn to pay a purchase price and a second number associated with said first number which, when used with said first number, enables withdrawal of funds from said account, said method comprising the steps of:

transmitting said first number over said network from a consumer location to an on-line merchant location;

forwarding said first number over said network from said on-line merchant location to a third party contractor location;

transmitting a query for said second number over said network from said third party contractor location to said consumer location;

transmitting said second number over said network from said consumer location to said third party contractor location; and

checking at said third party contractor location whether said first and second numbers are valid.

APPENDIX 5

9. (Amended) A system for making purchases over a computer network using a first number that identifies a consumer's account from which funds will be withdrawn to pay a purchase price and a second number associated with said first number which, when used with said first number, enables withdrawal of funds from said account, said system comprising:

a first computer at a consumer location, said first computer being connected to said network;

a second computer at an on-line merchant location, said second computer being connected to said network; and

a third computer at a third party contractor location, said third computer being connected to said network;

wherein said first number is transmitted from said first computer to said second computer over said network;

wherein said first number is forwarded from said second computer to said third computer over said network;

wherein a query for said second number is transmitted from said third computer to said first computer over said network;

wherein said second number is transmitted from said first computer to said third computer over said network;

and wherein said third computer checks whether said first and second numbers are valid.

APPENDIX 6

17. (Amended) A method of authorizing a purchase to be made over a computer network using a first number that identifies a consumer's account from which funds will be withdrawn to pay a purchase price and a second number associated with said first number which, when used with said first number, enables withdrawal of funds from said account, said method comprising the steps:

receiving at a third party contractor location said first number transmitted over said network from an on-line merchant location;

transmitting a query for said second number over said network from said third party contractor location to a consumer location;

receiving at said third party contractor location said second number transmitted over said network from [a] said consumer location; and

verifying the validity of said first and second numbers at said third party contractor location.

APPENDIX 7

22. (Amended) A system for authorizing a purchase to be made over a computer network using a first number that identifies a consumer's account from which funds will be withdrawn to pay a purchase price and a second number associated with said first number which, when used with said first number, enables withdrawal of funds from said account, said system comprising:

a computer connected to said network;

said computer being configured to receive said first number transmitted over said network from an on-line merchant's computer, transmit a query for said second number over said network to a consumer's computer, receive said second number transmitted over said network from [a] said consumer's computer, and verify the validity of said first and second numbers.

APPENDIX 8

PROPOSED DRAWING CORRECTIONS